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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,879	11/26/2003	John A. Kolb	TPR100016000	9336

22891 7590 06/03/2005

DELIO & PETERSON  
121 WHITNEY AVENUE  
NEW HAVEN, CT 06510

EXAMINER
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FORD, JOHN K

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/723,879

Applicant(s)

KOLB, JOHN A.

Examiner

John K. Ford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/12/2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17, drawn to heat exchange apparatus, classified in class 165, subclass 140.
- II. Claims 18-24, drawn to a method of heat exchange, classified in class 165, subclass 41.

The inventions are distinct, each from the other because:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as heating fluids in non-vehicular applications and as evidenced by applicant's claims 23 and 24, the same apparatus is capable of multiple methods of heat exchange.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

In addition, please elect a particular species from the list enumerated below:

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This application contains claims directed to the following patentably distinct species of the claimed invention:

first species of Figure 5, as shown,

second species of Figure 7, as shown,

third species of Figures 6-7, with the modification discussed in the last sentence of paragraph 0043 and

an in-determinant number of variants of at least the first of the aforementioned species, partially illustrated in Figures 3 and 8, wherein one or the other of the radiator or the CAC can be extended horizontally past the other at one or both ends (see phantom lines in Figure 3) and/or one or the other of the radiator or CAC can be extended vertically past the other at one or both ends (see phantom lines in Figure 8).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least claim 1 appears to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

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are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

In the event one of the in-determinant number of variants is elected, a proposed drawing correction illustrating it, and only it, is required in response to this action. The proposed drawing correction must be of such a quality that the Examiner can determine which of the heat exchangers is larger than the other(s) and whether or not this change in size is at one or both ends and/or one or both sides.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

The drawings are objected to because Figure 1 must have a legend of "PRIOR ART", since applicant has identified it as such in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-9, 10, 11, 15, 16 and 18-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP, A, 0,522,288.

The document has been provided here with a translation and it discloses a centrally mounted coolant radiator and a split charge air cooler (CAC) with a core of the CAC mounted on either side of the radiator in the manner claimed in the enumerated claims. Regarding claims 2 and 11, see connection line 5. Regarding claim 4-9, see page 4, lines 17-21 of the translation. Regarding claim 16 and 24, see page 6, lines 8-14 of the translation.

Regarding claim 10, 16 and 24 the heat exchanger does not undergo a metamorphosis into a new heat exchanger merely by affixing instructions that in use it is to be turned on its side (i.e. rotated 90 degrees on its side) or to switch the fluids. See MPEP 2114, incorporated here by reference.

Claims 1, 2, 4-13 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP, A, 0,522,288 as applied to claims 1, 2, 4-9, 10, 11, 15, 16 and 18-24 above, and further in view of applicant's admitted prior art Figure 1.

To have oriented and connected the charge air cooler cores of EP '288 in series in the manner taught by the admitted prior art (first through a rear upper mounted CAC core and then through a front lower mounted CAC core) would have been obvious to one of ordinary skill in the art to obtain the benefits of cooler charge air (e.g. greater density hence more horsepower and less propensity to "knock").

Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '288 or EP '288/admitted prior art as applied to claim 1 above, and further in view of Hughes.

In Hughes conduits 18 and 19 at each side of the headers that they connect to improve flow to the next header vis-à-vis using only one connector (such as 5 in EP'288). To have used two connectors (5) in EP '288 at opposite ends of the headers of the associated CAC cores would have been obvious to one of ordinary skill to improve the flow distribution of air and thereby improve heat transfer.

Claims 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '288 or EP '288/admitted prior art as applied to claim 1 above, and further in view of Heine et al (5,657,817) or Neufang (6,615,604) or JP 11-264688.

Heine teaches in Figures 5 and 7 forming the ends of a charge air cooler and a radiator at different outward positions to advantageously facilitate connections.

Neufang teaches a CAC 12 (col. 5, lines 34-36) and a radiator 14 can be formed so that one projects beyond the other to facilitate mounting.




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Finally, JP '688 teaches (Fig 1b, Fig 4b and Figs 6a and 6b) making adjacent radiators project one beyond the other to advantageously reduce the overall thickness of the overall structure.

To have used any of the teachings of Heine et al (5,657,817) or Neufang (6,615,604) or JP 11-264688 in the prior art to EP '288 or EP '288/admitted prior art to facilitate ease of connection or advantageously reduce the thickness of the resulting structure would have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication should be directed to John K. Ford at telephone number 571-272-4911.



**John K. Ford**  
**Primary Examiner**